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APPLICATION NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
09/905,504			

EXAMINER	
ART UNIT	PAPER NUMBER

DATE MAILED:

INTERVIEW SUMMARY

All participants (applicant, applicant's representative, PTO personnel):

(1) Kirsten Jolley, USPTO (3) _____

(2) Chris Ward (4) _____

Date of Interview 7/14/03

Type: ☐ Telephonic ☐ Televideo Conference ☒ Personal (copy is given to ☐ applicant ☒ applicant's representative).

Exhibit shown or demonstration conducted: ☐ Yes ☒ No If yes, brief description: _____

Agreement ☒ was reached. ☐ was not reached.

Claim(s) discussed: proposed claims 26-36

Identification of prior art discussed: Hasebe et al. '615

Description of the general nature of what was agreed to if an agreement was reached, or any other comments:
Discussed proposed claims and the prior art of Hasebe et al. The Examiner agreed that Hasebe et al. does not specifically teach using a different supply rate corresponding to each process solution to achieve a uniform thickness. Mr. Ward also discussed the unexpected results of achieving uniform coating thickness based solely on the supply rate of the process solutions as shown in Figure 1. Upon further review and updated search, the Examiner agreed that the proposed claims appear to be allowable.

(A fuller description, if necessary, and a copy of the amendments, if available, which the examiner agreed would render the claims allowable must be attached. Also, where no copy of the amendments which would render the claims allowable is available, a summary thereof must be attached.)

☒ It is not necessary for applicant to provide a separate record of the substance of the interview.

Unless the paragraph above has been checked to indicate to the contrary. A FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION IS NOT WAIVED AND MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has are ready been filed, APPLICANT IS GIVEN ONE MONTH FROM THIS INTERVIEW DATE TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW.

Examiner Note: You must sign this form unless it is an attachment to another form.

PROPOSED CLAIM AMENDMENTS FOR DISCUSSION DURING INTERVIEW

1.-25. (Canceled)

26. (New) A process solution applying method for selectively supplying different types of process solutions to a substrate in a small total supply amount, and forming a process solution film having a uniform thickness, the method comprising:

preparing a plurality of supply systems configured to selectively supply different types of process solutions to a substrate held by a rotatable spin holder, each of the supply systems having a supply mechanism configured to change a rate at which a process solution is supplied;

preparing a controller configured to control the supply systems, the controller having a storage section which stores data representing relationships between the process solutions and supply rates prescribed for the same, a selection section for selecting a process solution to be used from the process solutions, and a control section which selects a supply system corresponding to the selected process solution, and drives the supply mechanism of the selected supply system at a supply rate prescribed for the selected process solution, wherein the supply rate of each of the process solutions is prescribed to be such a value that the corresponding process solution applied in a predetermined total supply amount, while the substrate is rotated at a predetermined rotational speed, forms a process solution film having a uniform thickness on an entire surface of the substrate;

holding the substrate by the spin holder;

selecting, by the controller, a supply system corresponding to a process solution selected from the process solutions;

driving, by the controller, the supply mechanism of the selected supply system at a supply rate prescribed for the selected process solution, based on the data, thereby supplying the selected process solution to the substrate held by the spin holder; and

rotating the spin holder, thereby rotating the substrate to spread the selected process solution by virtue of centrifugal force and to coat the substrate with the selected process solution.

27. (New) The method according to claim 26, wherein the process solutions are different types of resist solutions, and the predetermined total supply amount for forming the process solution film is set to be 2.0 ml or less.

28. (New) The method according to claim 26, wherein each process solution is supplied by a positive-displacement pump for drawing and discharging the process solution, and a stepping motor for driving the positive-displacement pump and changing a rate of discharging the process solution when controlled in terms of rotational speed.

29. (New) The method according to claim 28, further comprising detecting, by a detecting section of the supply mechanism of each supply system, the amount of the corresponding process solution remaining in a replaceable supply tank, based on the number of revolutions of the stepping motor.

30. (New) The method according to claim 28, further comprising detecting, by a detecting section of the supply mechanism of each supply system, the time at which a replaceable filter is to be replaced, based on the number of revolutions of the stepping motor, the filter allowing the corresponding process solution to pass therethrough.

31. (New) The method according to claim 26, further comprising:

placing respective nozzles for supplying the process solutions at a waiting section disposed outside the spin holder; and

driving, by the controller, a transfer system to pick up one of the nozzles corresponding to the selected supply system, and transfer the nozzle from the waiting section to a position above the substrate.

32. (New) A resist solution applying method for selectively supplying different types of resist solutions to a substrate in a small total supply amount, and forming a resist solution film having a uniform thickness, the method comprising:

preparing a plurality of supply systems configured to selectively supply different types of resist solutions to a substrate held by a rotatable spin holder, each of the supply systems having a supply mechanism configured to change a rate at which a resist solution is supplied;

preparing a controller configured to control the supply systems, the controller having a storage section which stores data representing relationships between the resist solutions and supply rates prescribed for the same, a selection section for selecting a resist solution to be used from the resist solutions, and a control section which selects a supply system corresponding to the selected resist solution, and drives the supply mechanism of the selected supply system at a supply rate prescribed for the selected resist solution, wherein the supply rate of each of the resist solutions is prescribed to be such a value that the corresponding resist solution applied in a predetermined total supply amount, while the substrate is rotated at a predetermined rotational speed, forms a resist solution film having a uniform thickness on an entire surface of the substrate;

holding the substrate by the spin holder;

placing respective nozzles for supplying the resist solutions at a waiting section disposed outside the spin holder;

selecting, by the controller, a supply system corresponding to a resist solution selected from the resist solutions;

driving, by the controller, a transfer system to pick up one of the nozzles corresponding to the selected supply system, and transfer the nozzle from the waiting section to a position above the substrate;

driving, by the controller, the supply mechanism of the selected supply system at a supply rate prescribed for the selected resist solution, based on the data, thereby supplying the selected resist solution to the substrate held by the spin holder; and

rotating the spin holder, thereby rotating the substrate to spread the selected resist solution by virtue of centrifugal force and to coat the substrate with the selected resist solution.

33. (New) The method according to claim 32, wherein the predetermined total supply amount for forming the resist solution film is set to be 2.0 ml or less.

34. (New) The method according to claim 32, wherein each resist solution is supplied by a positive-displacement pump for drawing and discharging the resist solution, and a stepping motor for driving the positive-displacement pump and changing a rate of discharging the resist solution when controlled in terms of rotational speed.

35. (New) The method according to claim 34, further comprising detecting, by a detecting section of the supply mechanism of each supply system, the amount of the corresponding resist solution remaining in a replaceable supply tank, based on the number of revolutions of the stepping motor.

36. (New) The method according to claim 34, further comprising detecting, by a detecting section of the supply mechanism of each supply system, the time at which a replaceable filter is to be replaced, based on the number of revolutions of the stepping motor, the filter allowing the corresponding resist solution to pass therethrough.